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PHOTOGRAPHIC INTELLIGENCE REPORT

VITAL RECORDS COPY

ARSENALS AND ARMAMENTS PLANTS

TAI-YUAN, CHINA

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CIA/PIR 75029

DATE OCT. 1966

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FIGURE 1

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CIA IMAGERY ANALYSIS

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TAI-YUAN ARSENALS/ARMAMENTS PLANTS, CHINA

Several significant munitions production centers are located at Tai-yuan, in Shansi Province, at the approximate geographic coordinates of 37 46N - 112 30E. Major industrial developments, especially in the northern and western outskirts of the city, were begun in the 1950's.

On Figure 3, a photographic enlargement of northern Tai-yuan, most of the major arsenals are shown. Description of functional areas or other features in the following discussions are keyed to the corresponding Figure for each location.

TAI-YUAN EXPLOSIVES PLANT NORTH

LOCATION

An explosives processing installation is located in the northern outskirts of Tai-yuan at the approximate geographic coordinates of 38 01N - 112 31E. It is connected by rail to a secured explosives storage area approximately two nautical miles to the east and to Tai-yuan Explosives Plant South, located a short distance to the southeast. The main plant area, not including the adjacent administration and housing sections or the secured explosive storage site, occupies approximately 300 acres.

DESCRIPTION

The production and storage areas consist mostly of heavily revetted, protected, and dispersed buildings, typical of explosives handling and processing areas. The following item numbers are keyed to Figure 4.

- (1) Explosives storage section. Contains nine revetted rail served buildings and thirteen small revetted buildings.
- (2) Probable high explosives processing section. Contains a heavily revetted building connected by pipeline to a small building outside the revetment, a rail served central support building, and a partially revetted building on the south side of the section.
- (3) This section contains large warehouses for non-explosives material, a possible wood-working shop, a probable maintenance shop, and other plant support facilities. The western portion of this area contains a small unidentified group of buildings, and one bunkered structure.

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(4) Major explosives processing section. Consist of six long narrow buildings possibly housing individual production lines. Rail served warehouses and other smaller support facilities are located adjacent to each of these production buildings, and in one case is connected by conveyor to the production section. Three of the buildings have protected baffled entrances and two have roofless rectangular sections which extend outward from the wall, enclosing an area of [redacted]. These appear to have been built by extending interior blast walls, [redacted]

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(5) Explosives processing section. Facilities include seven separate revetted or partially revetted explosives processing buildings, with small adjacent revetted rest houses and several miscellaneous non-revetted structures.

(6) Support facilities. Lying to the south of the main plant are a number of associated support facilities. These include administration buildings, workers housing, a motor pool, small shops, and a possible foundry.

(7) Rail line. This rail line extends approximately two nautical miles east to a secured explosives storage area.

25X1 LEVEL OF ACTIVITY

When first observed [redacted] this installation was in the late stages of construction. However, steam and other utility lines were not laid and several buildings, mostly in the support area (section 6) were under construction. The installation appears to be complete and operational [redacted]. Only minor additions to the plant have been made since that date. An explosives processing building (a) was erected [redacted] replacing a similar but smaller building. A permanent covered walkway (b) was constructed during this same period. [redacted] a small possible laboratory building (c) and three probable warehouses (d) were built.

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[redacted] the only further additions were an additional warehouse (e), three small buildings and a small unidentified tank-like structure in section 2, and a covered walkway (f) from the rail line to a revetted probable shipping and receiving building.

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This installation did not appear to be operational [redacted]. The plant facilities appeared complete on coverage [redacted], but due to the poor quality of the photography, it is difficult to determine if the plant was in operation, although a probable rail car adjacent to an explosives [redacted]

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storage building (section 1) suggests that some production may have been in progress. On excellent [] coverage [] definite indications of production are evident such as roof stains on several of the buildings, eleven rail cars on plant sidings, smoke or steam near the wood-working shop, and one probable truck and several small unidentified objects on the plant roads. On all subsequent coverage, similar signs of production activity are noted, but the actual level at which the plant has been operating cannot be accurately estimated.

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CONCLUSIONS

Tai-yuan Explosives Plant North is a large explosives processing and loading installation. The lack of tankage, above ground piping, and acid areas indicates that there is no explosives manufacture. The numerous separate processing areas for explosives and the general appearance of the plant suggests that it was designed for large scale production of several different explosive components. Propellant loading is a possible function of this plant, in association with the manufacture of double base propellant at nearby Tai-yuan Explosives Plant South.

TAI-YUAN EXPLOSIVES PLANT SOUTH

LOCATION

This large installation is located approximately one nautical mile southeast of Tai-yuan Explosives Plant North, at the approximate geographic coordinates of 37 59N - 112 32E. The plant covers approximately 400 acres, not including the large adjacent ballistics and solid propellant test facility.

DESCRIPTION

Many buildings at this plant are generally heavily protected or dispersed; they are connected by above ground pipelines and covered walkways. Storage tanks are noted mainly in the shipping and receiving section. These features are typical of explosives production and handling plants. The following item numbers are keyed to Figure 5.

- (1) Unidentified processing section.
- (2) Nitrocellulose production section. Facilities include a possible acid plant (a) with nearby liquid and probable cellulose receiving and storage (b); possibly nitration building (c); and pyro processing buildings (d).

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(3) Fabrication section. Facilities include several large shop-type buildings, possibly for processing of non-explosive components; a long probable receiving and warehouse building; and a possible laboratory building (e) with a small adjacent bunkered structure.

(4) Nitroglycerine production section. Consist of rail served raw materials receiving and storage buildings and one completed and two partially constructed nitroglycerine production lines.

(5) Double-base powder production section. The non-solvent process is probably utilized. Three of the four large processing buildings are apparently complete, as well as the mixing and preparation buildings in the north part of this section.

(6) Abandoned construction. No attempt has been made to complete the early construction in this area, which remains basically unchanged since observed [REDACTED]. The layout suggests that an explosives processing section was planned in this area.

(7) Probable drying and finishing buildings, with alternating rest houses, occupy this section.

(8) Three processing buildings, possibly associated with the nearby rocket test facility and two large probable product storage and shipping buildings (revetted and rail served) are located in this section.

(9 and 10) Maintenance and storage sections.

(11) Shipping and receiving section. Rail served shipping and receiving point with warehousing and open storage. Immediately south of this separately fenced area is a water treatment facility.

(12) Support section. Immediately south of the main plant is a area containing administration buildings, laboratories and possible shops. Barracks and probable construction support buildings lie east of the administration area; several of these have been removed since the earliest coverage.

(13) Ballistics and solid propellants test facility. Two test ranges and associated facilities occupy the southern portion of this separately secured section. Facilities to the north of the ballistics test area include one test cell, another building containing two possible test cells, and probable missile checkout and support buildings.

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LEVEL OF ACTIVITY

When observed on earliest coverage [] this installation was in the mid-stage of construction. All major processing sections were under construction and many buildings appeared to be nearly complete. Construction progress has continued at a fairly slow pace since then. [] buildings in the nitrocellulose section appeared nearly complete, the west nitroglycerine line (f) was well advanced, work was continuing on explosives processing and propellant test facilities, and overhead pipelines and covered walkways were under construction. Excellent coverage [] revealed: additional construction on walkways, pipelines, and conveyors, probable completion of the west nitroglycerine line, the construction of two large revetted storage buildings (g) and further construction at the solid propellants and ballistics test facility. One row of buildings (h) in the probable drying and finishing section was probably near completion. [] progress continued. A rail spur was constructed along the north side of the plant, serving the areas of nitrocellulose and nitroglycerine production and the large explosives storage buildings. A spur was also constructed into the central portion of the nitrocellulose section. Improvements were made on the plant road network and a area of new construction (i) was present in the probable finishing and drying section. Construction in this area was continuing in [] and a rail spur has been extended into an area of new construction (j), directly west of the test facility. This may be an explosives storage area, when completed.

Rail tank cars have been noted on sidings in the plant area on coverage [] However, the rate of progress in plant construction suggests that the plant probably could not have been in operation until the [] and then probably only on a test or "batch" basis. Construction, especially on tankage, pipelines, and conveyors in the nitrocellulose area, [] suggests that any production prior to [] was on a small scale. Roof stains at the probable acid plant and the general stage reached in plant development indicates that the installation is operational by [] However, [] construction is still occurring at the west end of the explosives finishing and drying section and on the probable explosives storage facilities.

The solid propellant and ballistics test facility appeared near completion on [] coverage, and only minor construction has occurred since that date.

The two south nitroglycerine lines and an explosives processing area (section 6) have been left unfinished.

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PIR 75029CONCLUSIONS

Tai-yuan Explosives Plant South is a large double-base propellants production complex. The rate of progress in erecting this plant has been very slow and portions of the original construction have apparently been abandoned.

EXPLOSIVES LOADING PLANTLOCATION

This small installation is situated in the Ho-hsi industrial region, a short distance west of the city of Tai-yuan, at the approximate geographic coordinates of 37 53N - 112 29E. The maximum north-south and east-west dimensions are approximately 2,000 and 1,600 feet respectively. However, only a small portion of this area is being utilized for production and storage.

DESCRIPTION

This installation appears to only contain facilities for processing and loading of explosives. Both the processing and storage areas are characterized by small heavily revetted and dispersed buildings. The following item numbers are keyed to Figure 6, Section A.

(1) Three dispersed and heavily barricaded identical pairs of probable explosives processing buildings are located in this section. A small revetted pit at annotation (a) added []
[] may be utilized for destruction of faulty material.

(2) This area contains seven small dispersed probable processing buildings. Barricades have been erected between the buildings and the section has been heavily planted with trees.

(3) Four long narrow buildings with an earthen wall along their south side and a large administration building are the main structures in this area. Several protected explosives processing buildings, a very small possible boilerhouse, and two service buildings are located south of this main group of buildings. A small storage tank is also located in this area. The group of buildings immediately south of this plant are quite similar in appearance to the main buildings in area 3. However, they are not considered to be directly associated with this plant, because they are not within the plant fenceline and are very poorly secured.

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(4) Eight small revetted magazines are located in the northwest corner of this section. Other features include: a group of abandoned earth mounded kilns and a small unidentified building.

(5) Immediately east of the main gate are four administrative type buildings which may be associated with this plant, but are more likely to be public buildings serving the nearby housing areas.

LEVEL OF ACTIVITY

Facilities at this installation have remained generally static since the first coverage [redacted]. One building (c) [redacted] has been dismantled [redacted]. An additional floor was added to one of the long narrow buildings (b) in area 3 [redacted]. An earthen wall on the north side of this building was removed [redacted]. During the [redacted] the previously mentioned possible burn area was constructed.

Indications of activity other than minor changes in plant facilities are scarce on all available coverage. No materials have been observed in open storage and few vehicles have been noted in the plant area. Trails to some of the processing and storage buildings appear unused. The level of operation is probably no more than moderate. The roof of one of the small barricaded processing buildings in area 2 is partially open on [redacted] coverage, suggesting an explosion or dismantling.

CONCLUSIONS

This plant is interpreted as being a small explosives processing and loading facility. The presence of small heavily protected processing and storage buildings suggests that the primary function is the handling of initiating compounds, in the loading of detonators and percussion elements. There is no indication that explosive compounds are made at this plant, although finishing of explosives shipped in from a manufacturing plant may occur in the small processing building in area 3. The addition on one of the group of long narrow buildings, and the removal of a portion of the earth banks from the north side of this group, suggests that they are probably no longer being used as loading lines. Their function may now be in the handling and assembly of non-explosive components.

TAI-YUAN ARSENAL 743 NEW

LOCATION

Immediately east of the previously discussed Explosives Loading Plant and north of the Tai-yuan Heavy Machinery and Equipment Plant is a large industrial installation which has been designated on the DIA Town Plan as Tai-yuan Arsenal 743 New. It occupies a fence enclosed area of approximately 3,400' x 2,850'.

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DESCRIPTION

The predominate structures at this site are large monitor roofed buildings, with high bays and furnace buildings, typical of fabrication industries. The following item numbers are keyed to Figure 6, Section B.

- (1) Gas or water gas retort building. The pipeline network indicates that the gas generated is used to fire furnaces throughout the installation. A water treatment area lies east of the retort building.
- (2) A large boilerhouse with one stack is located east of the retort building and is connected by a conveyor system leading to the nearby rail served coal piles.
- (3) Large rail served probable assembly building with an adjoining possible forge/foundry. A bridge crane is located north of this building.
- (4) These four large buildings are probably used as machine shops and for sub-assembly work. A possible forge/foundry section is present in the building with the two transverse monitors.
- (5) Probable shop buildings.
- (6) A probable foundry with warehouses and an open storage area directly to the west.
- (7) Power sub-station.
- (8) The largest building in the plant, and is possibly a fabrication/assembly hall.
- (9) South and east of the possible assembly hall are numerous small shops, maintenance buildings, and miscellaneous open storage.
- (10) Large probable foundry.
- (11) Unidentified C shaped building and a large shop.
- (12) Two small unidentified buildings.
- (13) Plant administration area, with three buildings at the entrance and several probable associated buildings located in the landscaped area east of the entrance.

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LEVEL OF ACTIVITY

This plant was in an advanced stage of construction when first observed [redacted] The only major building which didn't appear to be complete or nearly so, was the large possible assembly hall (8). This building appeared complete when observed [redacted] Other changes in plant facilities during this period included: completion of the foundry (10), the shop area (5), the addition of a small building east of the boilerhouse (2) and the bridge crane north of the assembly/forge-foundry building (3). [redacted] [redacted] only very minor changes are noted within the plant, such as additional warehousing (a), a small unidentified facility (b) which is connected by pipeline to the adjacent large shop/sub-assembly building, and new coal unloading and handling facilities in the gas plant (1) and boilerhouse (2) areas.

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Coal and other materials in open storage and roof stains in the foundry area (6), indicate that minor production had taken place [redacted] However, most buildings were probably in the late stages of construction at that time. The plant appeared basically completed in [redacted] but the poor quality photography precludes an interpretation of the level of operation. Smoke and steam have been observed near the foundry (6) and at a couple of other points in the plant, on most missions. The configuration of the coal piles shows variation on comparative coverage. However, definite signs of activity, such as these, have been rare at many facilities within the plant. Crates and unidentified items are noted in open storage and small unidentified objects have been seen moving on plant roads. A few rail cars have been in the plant area on all missions. This installation has been in operation, probably at a low to moderate level of productive activity since at least [redacted]

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CONCLUSIONS

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The type of production from fabrication industries, such as this installation, is difficult to determine. Although several good satellite and overflight missions are available, no identifiable products have been observed at this site. The presence of heating and processing equipment in association with large fabrication and assembly buildings establishes the production and probable assembly of metal parts. However, on the basis of photography, it is not possible, at this time, to confirm or negate the possibility that this plant is engaged in armament production.

TAI-YUAN EXPLOSIVES PLANT

LOCATION

An explosives manufacturing plant, covering a north-south oriented area of approximately 3,200 feet by 1,400 feet is located in the north-central

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portion of Tai-yuan at the approximate geographic coordinates of 37 54N - 112 34E.

DESCRIPTION

Present characteristics of this installation were already well established when it was observed on 1945 coverage. Three basic functional sections are contained within this plant: chemical processing is the main function in the southern part of the plant, revetted or barricaded explosives processing and storage buildings are the general type present through the central portion of the plant, and the north end, which was formerly an explosives storage area, is now utilized in non-explosives processing and for general shop/storage purposes. The following item numbers are keyed to Figure 7:

- (1) Administration and other plant support buildings.
- (2) Chemical processing related to explosives production is probably the main function, but no definitive indicators were noted. The production facilities are composed of housed processing units which are interconnected by pipelines. A boilerhouse and a probable acid section are present.
- (3) Shop, storage, and plant support buildings.
- (4) Production of explosives is completed in this area of barricaded and revetted structures.
- (5) Unidentified chemical processing.
- (6) Six heavily revetted or earth covered buildings and one small barricaded structure. Loading operations or possibly black powder production could be accomplished in this group of buildings, which is somewhat isolated from the remainder of the plant.
- (7) Plant park/garden area.
- (8) Explosives loading is the probable operation in this area of small protected building. A wall separating section 10 from the remainder of the plant, built during the past year, has been extended through this area, suggesting that two separate loading operations are accomplished or that a portion of this area is now being used for another purpose (storage, etc.).
- (9) This northwest portion of the plant was formerly utilized as an explosives processing and storage area, but many of the buildings have been abandoned or converted to other purposes (shops, storage, etc.).

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25X1 (10) A non-explosives processing industry which appears to have been separated from the remainder of the installation by wall or fence.

LEVEL OF ACTIVITY

25X1 The basic features of this plant were already complete when it was observed [redacted]. Changes in production facilities within the chemical and explosives processing areas have been minor since that date. A processing facility (a) was erected [redacted] a small building was added in section 2, and a small addition to an explosives handling building (b). Also, the park area (7) was built and changes were made in storage and support areas (3 and 9). [redacted] the few changes have included: new internal plant walls, a small barricade (near the previous addition b), and a pipeline from the coke oven area in the nearby coke, iron and steel plant.

25X1 Major changes in the northeast portion of the plant (10) have occurred since [redacted]. However, the general appearance of this unidentified processing area and the recently constructed wall separating this section from the remainder of the plant, suggest that it is not related to the arsenal.

Rail tank cars were most numerous [redacted] and have been observed at this plant on all good quality missions. Smoke and steam have been visible at the boilerhouse and a couple of other locations on several occasions, and traffic is noted within the plant on most coverage. These indicators along with the minor changes in plant facilities during the 1959-1966 period suggest that the installation has been operating at least at a moderate level.

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CONCLUSIONS

The rather complicated and diverse facilities at this location indicate the plant was probably designed to produce different types of explosives. Production may have included manufacture of initiator, propellant, and intermediates, as well as loading operations. The dismantling or abandoning of much of the major explosives storage area and some loading facilities suggests that certain operations have been shifted elsewhere. However, the chemical processing sections have been active during the entire 1959-1966 period and certain explosives processing facilities are still in operation. The exact nature of present production cannot be generally identified, although initiator manufacture and explosives loading are among the possible plant functions along with the associated acid plant and other chemical processes.

EXPLOSIVES PLANT AND STORAGE AREASLOCATION

An extensive explosives manufacturing plant is located east of the city in steep ravines in the loess soils of this area at the approximate geographic

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coordinates of 37 54N - 112 35E. The irregularly shaped fence enclosed area has maximum dimensions of approximately 5,000 feet east-west by 2,500 feet north-south. However, the actual manufacturing area is mostly confined to the level valley ground, with the terraced slopes being used for agriculture.

DESCRIPTION

Facilities at this non-rail served installation are divided into three basic groups: an explosives manufacturing and processing section, including possible test facilities and some explosives storage, a plant support section generally confined to the west, near the plant entrance, and a third section containing probable metal parts manufacture and several revetted buildings. Nearby explosives storage and possible processing areas may be associated with this installation. The following item numbers are keyed to Figure 8.

(1) Plant support section include: a motor pool area, plant administration buildings, and a shop/warehouse area probably supporting plant maintenance and serving as a shipping and receiving section.

(2) The manufacture of metal parts is probably associated with the two unprotected buildings with roof vents. The small revetted structures, mostly located around the valley edges are possibly for explosives storage, although minor loading operations could be accomplished in such buildings. A small boilerhouse is also located in this area.

(3) The major production area consists of two lines of buildings excavated into the hillside or revetted [redacted] covered walkways, and pipelines. A possible acid area and boilerhouse is located immediately east of this building group. Explosives processing and storage is the probable operation in other revetted buildings located in various parts of this section. 25X1

(4) Revetted storage and possible explosives processing buildings which are probably associated with this plant, are in two small areas, outside the main plant fenceline. Northwest of this installation, but not shown on this graphic (see area annotated, explosives storage, on Figure 9) is an explosives storage area which appears to be directly connected by road to this manufacturing plant. These nearby explosives associated areas are probably utilized as storage, handling and shipping points for products from this installation.

LEVEL OF ACTIVITY

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The general layout of this plant was apparent when first observed [redacted] However, a large expansion program has occurred since that date. The southwest plant fenceline was extended [redacted] the south and northwest portions [redacted] the north and east edges were changed. Fencelines around the outer perimeter of the plant

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which are new since [] are shown by dashed lines, as are the lines which are used to illustrate the separate plant sections.

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Several small shop and administrative buildings were erected in the support area [] the administration area (a) and the probable motorpool/shop section (b) were in an advanced stage of construction. These areas were completed [] but no other significant changes were apparent [] except for the addition of a couple of minor buildings []. The metal parts manufacturing area (2) remained unchanged []. Changes in the explosives manufacturing area (3) [] were minor, consisting of a few revetted explosives storage and processing buildings, and a small addition in the possible acid plant area (c). However, [] a major expansion in explosives manufacturing facilities was well underway. These include: the south explosives production line (d), consisting of several connected buildings in deep excavations, a large water tank near this explosives line, and a large unidentified building (e). Further construction also took place in the possible acid plant area (c). The explosives storage and possible processing areas (4) have been expanded significantly since [] when only underground storage was noted. All of the larger buildings have been erected [] no new construction is apparent.

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Other than the above described construction, the improved outline of plant roads, and the presence of trucks in the motor pool (b); indications of production are scarce. It is difficult to estimate the level of activity in the explosives industry because of the type of processes. However, the apparent completion of the recent large expansion suggests that productive activity is now at least at a moderate level.

CONCLUSIONS

This plant is interpreted to be primarily a producer of high explosives, with probable loading operations and the production of metal or other types of inert components as secondary functions. The possibility of propellant production and testing cannot be completely eliminated, although any nitrocellulose used in such compounds would have to be shipped into this plant, as facilities for nitrocellulose production are not present.

TAI-YUAN ARSENAL NO. 247

LOCATION

A fabrication industry, possibly Arsenal No. 247, is located a short distance southeast of the previously described Tai-yuan Explosives Plant, in the north-central portion of Tai-yuan at approximately 37 54N - 112 34E.

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This plant occupies an irregularly shaped area with maximum north-south and east-west dimensions of approximately 3,000 and 1,800 feet respectively.

DESCRIPTION

An arsenal was reported at this location prior to 1939. Photography from [] reveals a heavily defended installation covering a somewhat larger area than occupied by the plant presently at this site.

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Approximately 50 buildings comprised the plant at that time, with the main buildings being sawtooth roofed machine shop/fabrication structures. A test range was located within the plant area.

Since that date, however, the plant has been almost entirely rebuilt. Buildings within the walled plant area consist of forge/foundries, large machine/fabrication type, numerous small shops and support structures; typical of medium to heavy fabrication industries. The following item numbers are keyed to Figure 9, Section A.

- (1) Main plant entrance, with administrative and other support buildings.
- (2) Four machine shop/fabrication buildings.
- (3) Warehouses, small shops, and miscellaneous plant support buildings, west and north of the four major production buildings.
- (4) Six large heat processing buildings, plus a boilerhouse and gas plant. The major functions performed in this area are probably forge/foundry operations.
- (5) Shipping/receiving point for the plant. A probable crate plant, warehouses, overhead traveling cranes, and open storage are present.

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LEVEL OF ACTIVITY

Between 1945 and 1959, this installation was almost completely rebuilt, with only a few shop buildings in the northwest area remaining from the original plant. Changes in plant facilities [] were very minor. [] several shops in the northwest section had been removed and replaced with a warehouse (a), a large shop building and adjoining small building (b), and construction was in progress on sites being cleared in other parts of this section. [] three warehouses (c) and two small buildings (d and e) were completed at these previously cleared sites. During this same period, two minor buildings were added in other areas of the plant. An overhead traveling crane in the area of the coal stockpile was under construction [] but no major construction projects were apparent.

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When observed [] this plant appeared clear and uncluttered. However, some activity was apparently occurring as steam was visible near one of the foundries and a coal stockpile was present in the open storage area. On all subsequent coverage, the plant has appeared more active. Varying numbers of crates appear in the open storage area, several rail cars, generally hopper cars, are present on the plant sidings, smoke or steam is usually noted at one or two points within the plant, and several buildings have roof stains. Trucks have been noted on plant roads on several missions. This plant may not even have been in actual production in 1959, but coverage since that date discloses at least a moderate level of operation with a possible increase in activity

CONCLUSIONS

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Photographic evidence neither confirms or negates the possibility that this installation is utilized in armaments production. Unidentified equipment was noted within the plant confines [] but at no time has any identifiable machinery or equipment, other than ordinary plant vehicles, been observed. However, the type of facilities present, the general scope and size of this plant, and the fact that an arsenal formerly occupied this site, indicates that this installation is possibly Armaments Plant No. 247.

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POSSIBLE ARMS MANUFACTURING PLANT

LOCATION

A short distance southeast of the previously discussed installation, at approximate coordinates of 37 53N - 112 34E, is a smaller fabrication industry which has also been identified as Arsenal No. 247.

DESCRIPTION

Again, no definite identification of activities is possible. Facilities present at this installation include forge/foundry and machine/fabrication type buildings, typical of medium fabrication industries. The following items are keyed to Figure 9, Section B.

(1) Heat processing section of the plant. Forge/foundry operations are probably the main function. Open storage typical of that near foundries is present along the rail siding.

(2) Machine shop/fabrication buildings.

(3) The north portion of the plant consists mostly of small shops and warehouses.

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LEVEL OF ACTIVITY

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This installation has been constructed since 1944. The major components of the heat processing section (1) were complete [] Additions to this section since that date include: an unidentified building, near the large probable forge, under construction when observed [] and not completed until [] bins for foundry materials erected in the open storage area near the railhead [] a small furnace building constructed [] in the western part of this section, and a small probable warehouse erected during this same period on the north side of the main foundry area.

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The two main buildings in the fabrication area (2) were in the early stages of construction in [] and appeared to be complete when observed in [] A furnace building was erected during this same period. An unidentified building in the central part of this section, under construction [] appears to be nearing completion by the summer of []

The area of small shops and warehouses (3) in the section north of the machine shop/fabrication portion of the plant, remained generally unchanged [] A couple of small sheds were erected and building extensions were made, but no significant additions or deletions were observed.

The general appearance of the buildings in the heat processing section and the presence of coal and other raw materials near the railhead on the [] coverage suggests that production had previously occurred. However, no definite indicators of production, other than the movement of small unidentified objects in the raw material stockpile area, can be noted on coverage of that date.

[] the major plant components appear complete. Stockpiles of coal and other raw materials are present near the railhead, and steam from a possible valve was visible in the southwest portion of the plant. Because of the poor quality of this oblique [] coverage, no further details are apparent. On excellent [] coverage [] activity can be noted within the plant. Small unidentified moving objects are present and steam was observed from the same location within the plant as previously mentioned. The raw material area appears well stocked and many small unidentified objects were observed. However, on this and all other coverage, no smoke was visible from the smokestacks throughout the plant. On missions [] satellite photography, the general appearance of this plant has remained the same. Stockpiles of materials have been basically unchanged and steam has been noted several times at the location previously mentioned. []

[] single rail cars were noted on the plant siding. Vehicles have been observed on plant roads twice.

25X1

TOP SECRET

~~TOP SECRET~~

25X1

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25X1

25X1

25X1

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25X1

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(SECRET)

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25X1

TOP SECRET

25X1

25X1

25X1

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REQUIREMENT

C-RR5-82,716

CIA/IAD PROJECT

30864-5

TOP SECRET

25X1

25X1

25X1

25X1

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FIGURE 3

EXPLOSIVES STORAGE AREA

EXPLOSIVES PLANT NORTH

EXPLOSIVES PLANT SOUTH AND TEST FACILITIES

EXPLOSIVES PLANT

POSSIBLE ARSENAL NO. 247

EXPLOSIVES PLANT AND POSSIBLE ARSENAL NO. 743

POSSIBLE ARMS PLANT

EXPLOSIVES STORAGE AREA

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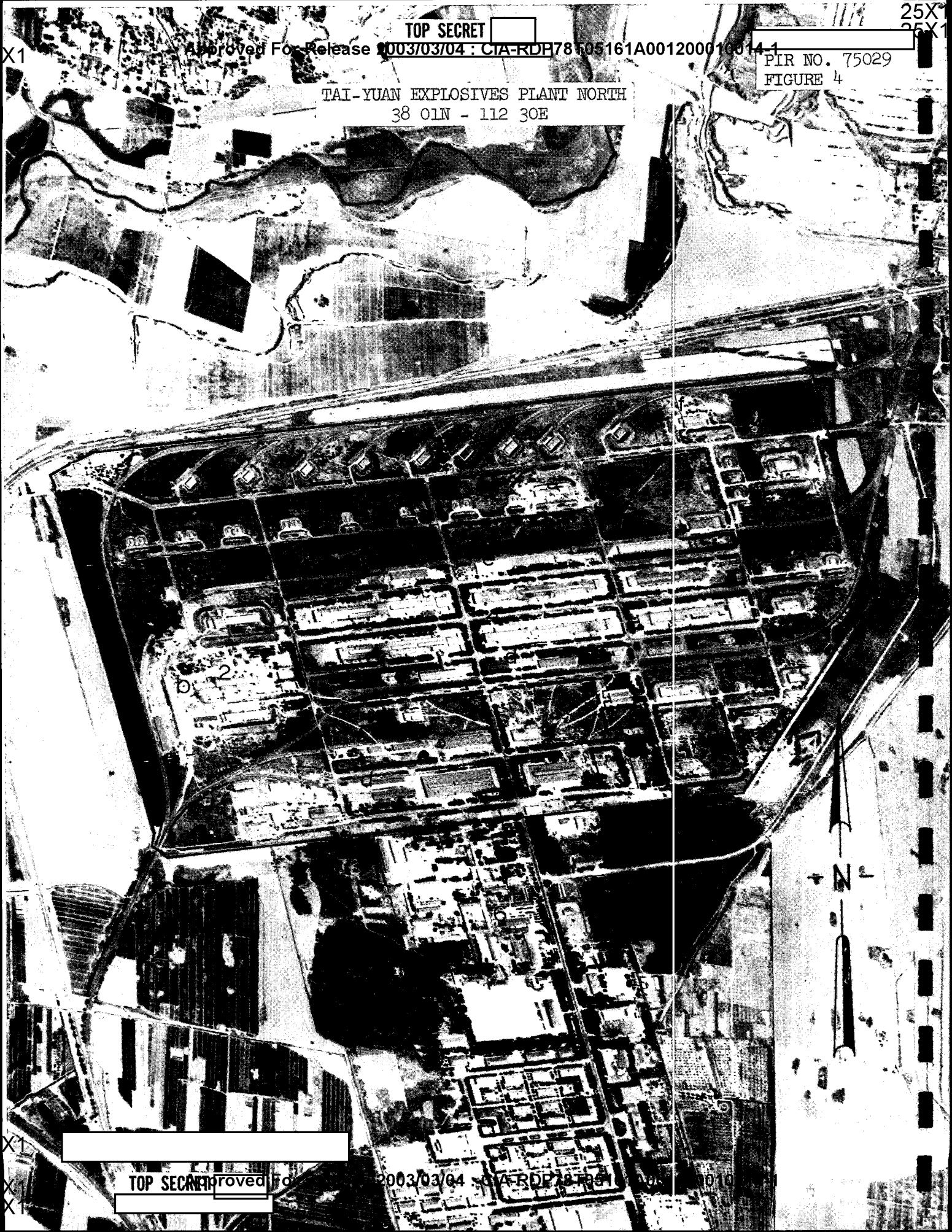
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PIR NO. 75029

FIGURE 4

TAI-YUAN EXPLOSIVES PLANT NORTH
38 01N - 112 30E



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2003/03/04

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FIGURE 4

25X
25X
25X

PIR NO. 74029
FIGURE 5

TAI-YUAN EXPLOSIVES PLANT SOUTH
37 59N - 112 32E

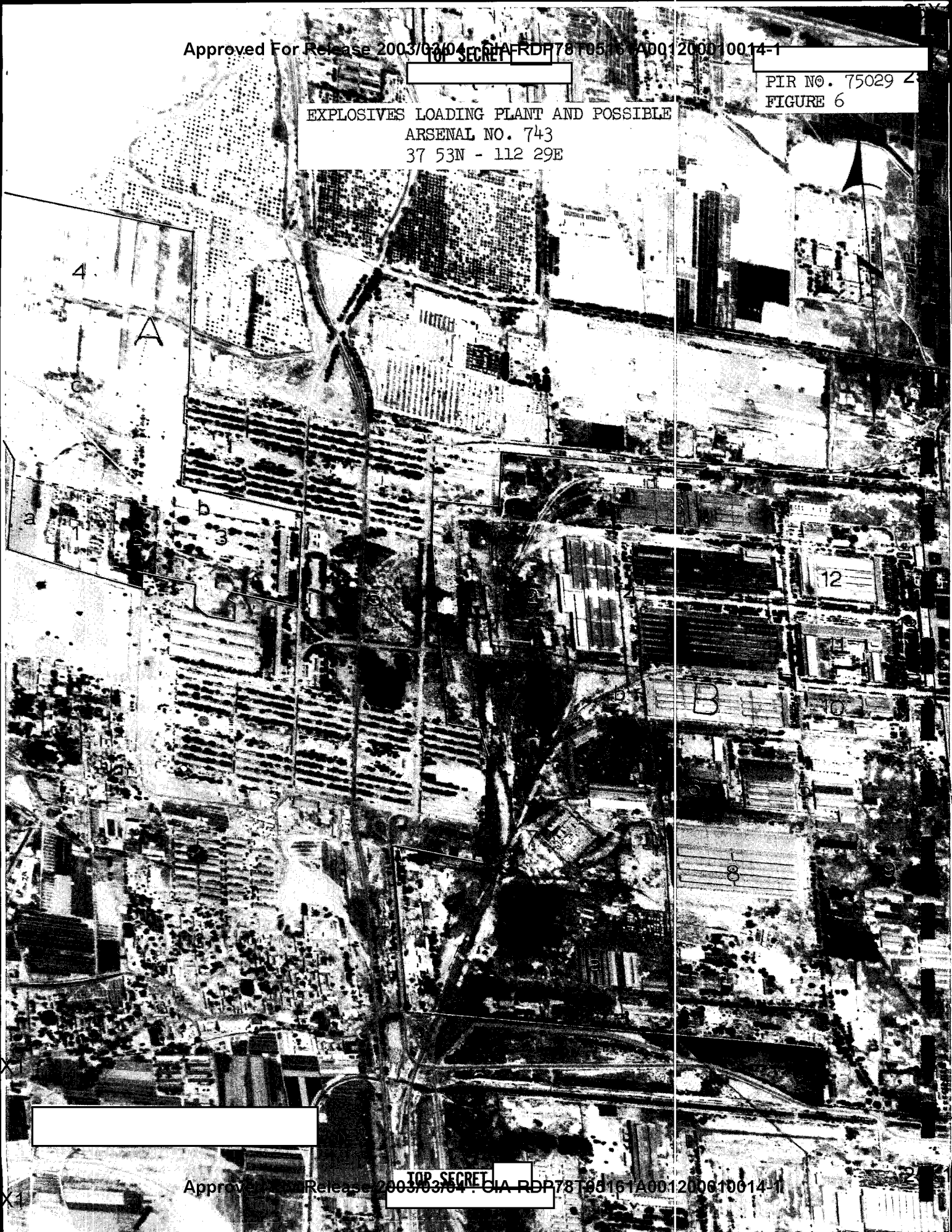


25X

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PIR NO. 75029 2
FIGURE 6

EXPLOSIVES LOADING PLANT AND POSSIBLE
ARSENAL NO. 743
37 53N - 112 29E



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TAI YUAN EXPLOSIVES PLANT
37 54N - 112 33E

PIR NO. 75029
FIGURE 7

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PIR NO. 75029
FIGURE 9

POSSIBLE TAI-YUAN ARSENAL NO. 247
37 54N - 112 34E

EXPLOSIVES STORAGE AREA

25X1

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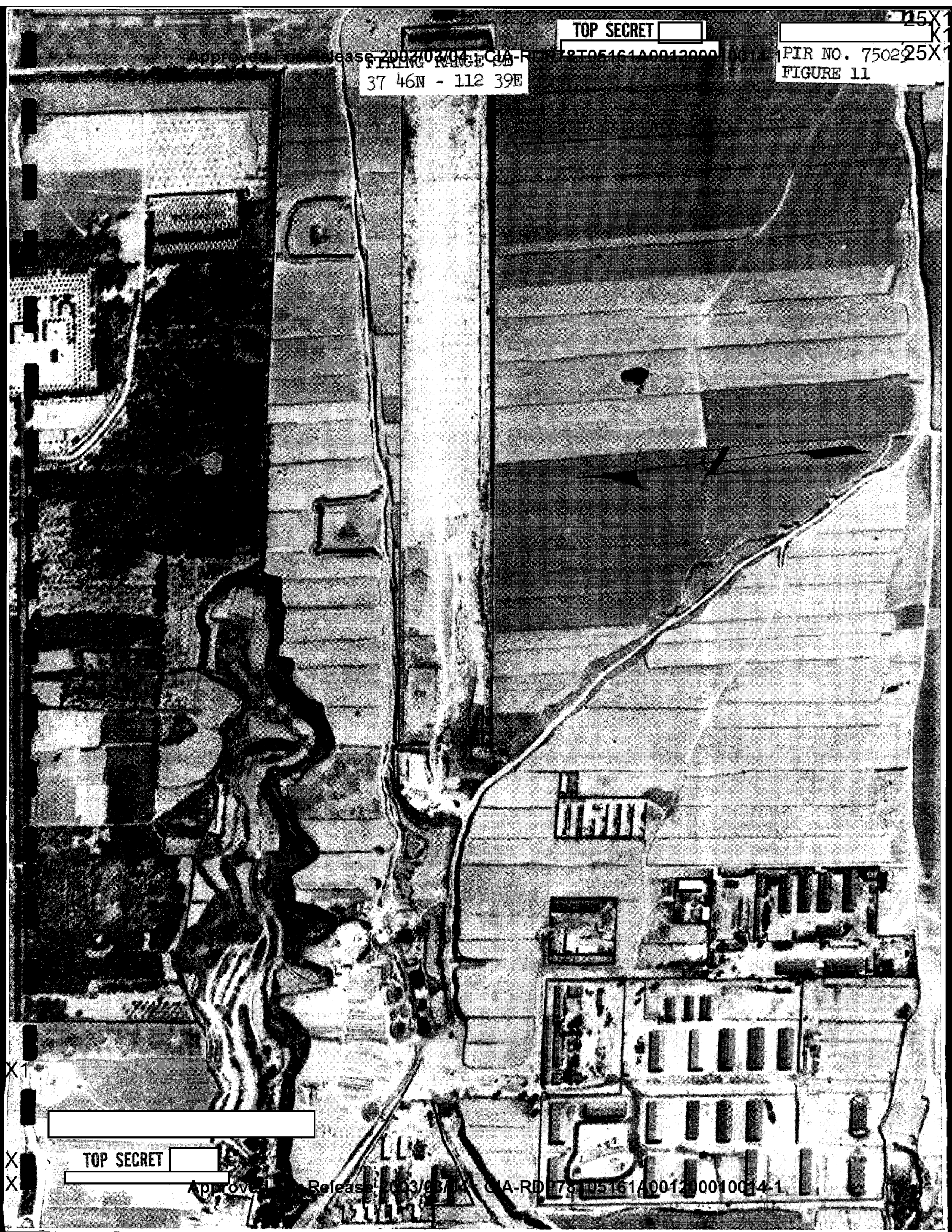
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PIR NO. 750225X
FIGURE 11

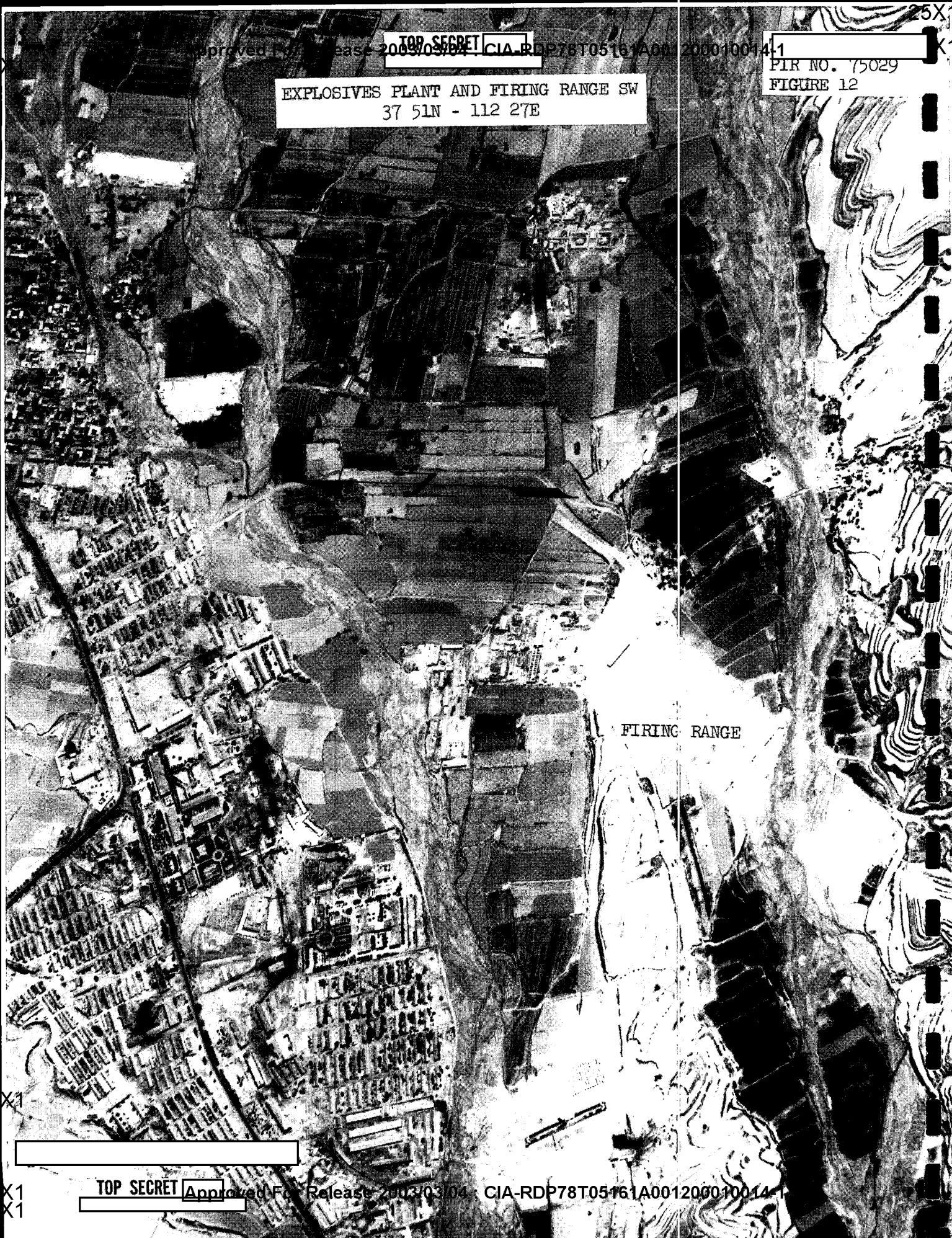
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FIRING RANGE 05
37 46N - 112 39E



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TOP SECRET

EXPLOSIVES PLANT AND FIRING RANGE SW
37 51N - 112 27E

PIR NO. 75029
FIGURE 12

FIRING RANGE

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